What is claimed is:

1. A method of resin-sealing a semiconductor device formed by disposing the undersurface of a semiconductor chip on one side of an island portion of a lead frame and connecting the surface of the semiconductor chip to lead portions of the lead frame disposed around the semiconductor chip with plural bonding wires, the method comprising:

disposing the semiconductor chip inside a cavity of a forming die and injecting resin through a gate of the forming die into the cavity to seal the semiconductor device with the resin in a state where portions of the lead portions are exposed,

wherein the gate of the a forming die is disposed only in a surface of the cavity facing the surface of the semiconductor chip and the resin is injected through the gate towards the surface of the semiconductor chip.

2. The method of claim 1, wherein the semiconductor device includes a support board at the other side of the island portion, wherein the support board substantially prevents the island portion from being bent by pressure of the resin in the injection direction of the resin during the injecting.

3. The method of claim 1, wherein the resin is injected through the gate towards the surface of the semiconductor chip in a direction that is substantially orthogonal to the surface of the semiconductor chip.

4. A forming die for resin-sealing a semiconductor device with a resin so as to encapsulate the semiconductor device, wherein the semiconductor device is formed by disposing the undersurface of a semiconductor chip on one side of an island portion of a lead frame and connecting the surface of the semiconductor chip to lead portions of the lead frame disposed around the semiconductor chip with plural bonding wires, the forming die comprising:

a cavity in which the semiconductor device is disposed; and

a gate for injecting the resin into the cavity, wherein the gate is disposed only in a surface of the cavity to face the surface of the semiconductor chip and so that the resin is injected through the gate towards the surface of the semiconductor chip.

5. The forming die of claim 4, wherein the gate is disposed so that the resin is injected through the gate towards the surface of the semiconductor chip in a direction that is substantially orthogonal to the surface of the semiconductor chip.

6. A resin-sealed semiconductor device in which a semiconductor device formed by disposing an undersurface of a semiconductor chip on one side of an island portion of a lead frame and connecting the surface of the semiconductor chip to lead portions of the lead frame disposed around the

semiconductor chip with plural bonding wires, is sealed with resin in a state where portions of the lead portions are exposed, the resin-sealed semiconductor device comprising:

an injection mark of the resin positioned at an end surface of the resin facing the surface of the semiconductor chip.

7. The resin-sealed semiconductor device of claim 6, further comprising a support board for supporting the island portion disposed at the other side of the island portion.

8. The resin-sealed semiconductor device of claim 6, further comprising a recessed portion disposed in the end surface of the resin, wherein the top of the injection mark is made lower than the end surface.